Paronychia with excessive granulation tissue as a side effect of isotretinoin treatment

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**ABSTRACT**

Isotretinoin has been successfully used to treat many patients, however, not without numerous adverse effects. Various adverse effects have been reported, including teratogenicity, myalgias, hypertriglyceridemia and transaminitis. Less commonly reported as a side effect is excessive granulation tissue resulting in acute paronychia. Presented here is a patient treated with isotretinoin who developed painful paronychia of the great toe with excessive granulation tissue.

**CASE PRESENTATION**

Patient is a 19-year-old female who presented with severe nodulocystic, scarring acne. After failing a topical regimen, she was initiated on isotretinoin at 0.5 mg/kg/day with a goal of 120 mg/kg cumulative dose. Her initial laboratory evaluation did not reveal any abnormalities. Her treatment course was complicated by hypertriglyceridemia requiring treatment with fenofibrate and simvastatin. She also developed a transaminitis involving both her ALT and AST. She completed a six-month course with significant improvement in her acne. She returned to the clinic three weeks after completion with complaint of a red, swollen and significantly painful right great toe that had developed over 3 days. She denied systemic symptoms. The patient was initiated on cefadroxil 500 mg po twice a day for seven days and topical mupirocin ointment twice daily for ten days. She was seen in clinic four days later and noticed decreased erythema and tenderness.

**PHYSICAL EXAM**

On exam at initial presentation, there was significant erythema and swelling with excess granulation tissue involving the proximal and lateral nail fold of the right great toe.

**DISCUSSION**

The adverse effects of isotretinoin treatment are common and vary in severity. Although this adverse event has been reported for many years, the mechanism remains unknown. Current theory is there is a hyperactive inflammatory and wound healing response at the sites of involvement. The isotretinoin causes exacerbation of epithelial function in the nail matrix, leading to a local exfoliative dermatitis with accumulation of scales in the nail folds. The scales are introduced into the periongual tissue and lead to a foreign body reaction. Similar reaction has been seen in patients receiving etretinate for the treatment of psoriasis.

Due to the lack of data on this condition, treatment is not well documented. It remains controversial as to whether isotretinoin needs to be discontinued; reports state either decreasing dosage or discontinuing the medication may be necessary. de Almeida Figueiras et al. recommend starting treatment with a two to three week course of topical steroids and topical antibiotics. If the patient fails this regimen, oral antibiotics may be required, and surgical treatment remains the last resort.

**CONCLUSION**

Many of the more common side effects of isotretinoin are well documented in regards to their prevalence and management. Paronychia with excessive granulation tissue has been reported for many years, however, both its exact prevalence and its pathogenesis remain unknown. It is important to be aware of these less common side effects and familiarize with their management.

**REFERENCES**


**CONFLICTS OF INTEREST**

No relevant conflicts of interest to disclose